

## Microbial factories to complement chemical synthesis of deuterated molecules.

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Deuterated cholesterol is a classic example of nature providing an elegant alternative to chemical synthesis. The humble yeast used in bread and beer making has been engineered to produce pure cholesterol, which can be deuterated to varying degrees by growth on the appropriate substrates. This complements our existing capability to synthesise a specific tail-deuterated form of cholesterol for use in membrane structure and behaviour research.

The expanding range of molecules available from the National Deuteration Facility provide the contrast required for neutron, IR and NMR characterisation of complex systems. Microbial cellulose has been studied in conjunction with ionic liquids, both of which can be produced in deuterated form.

Complementing or utilising synthetically deuterated molecules, yeast and algae are recent additions to our toolbox for producing deuterated fatty acids, sterols, polysaccharides and other biopolymers.

### Speakers Gender

Male

### Travel Funding

No

### Level of Expertise

Experienced Researcher

### Do you wish to take part in the poster slam

No

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**Session Classification :** Welcome Function